

BOROUGH OF CHARD.

# REPORT

OF THE

## MEDICAL OFFICER OF HEALTH,

For the URBAN DISTRICT COUNCIL, OF CHARD, for the year ending Dec. 31, 1897.

To his Worship the Mayor and the members of the Town Council of Chard.

GENTLEMEN,—I have the honor of submitting the following report of the Health of your borough during the year 1897, and various matters relating thereto :—

AREA AND POPULATION.—The various percentages are based on the acreage of the borough as extended in 1892, viz., 403 acres, and on the estimated population of 4,350.

BIRTHS.—The number of births registered was 140 : 72 males and 68 females, being at the rate of 32.1 per 1,000. The birth rate for England and Wales was 29.7.

PREVALENCE OF DISEASE.—During the spring there were a few cases of whooping cough which claimed six victims, all infants. Whooping cough is a disease which is very fatal among young children, as if severe it is almost always accompanied by bronchitis, and it is of such an insidious nature that one child may contract it from another if near enough to hear it whoop. In the autumn there were a great number of cases of catarrh of the liver—epidemic jaundice—a disease whose symptoms so closely resemble those of typhoid fever, though most dissimilar, that it was commonly reported an epidemic of that dread disease had broken out, and, although I was in a position to assure the alarmists that there was no connection between the two diseases, that the one then prevalent was caused by cold and was epidemic in East Devon and West Somerset, it was of no avail ; the scare had been raised, and to give a colourable reason for the report, the water was stated to be polluted. This will be dealt with under that heading.

NOTIFICATION OF DISEASE.—I am pleased to say the working of this Act has been attended with the happiest results, and to its beneficent influence I con-

sider your district has been saved from an epidemic of both typhoid and scarlet fever, imported into it. In every case of infectious disease the premises are examined, drains tested where necessary, defects remedied, instructions given for disinfection and isolation, and, at the proper time, premises purified. On March 1st typhoid fever was notified in Victoria Avenue. A young man working at Taunton was sent home suffering from catarrh which on the following day proved to be typhoid. On the 25th another case, also in Victoria Avenue, was notified, but I could not discover there had been any communication between the two houses.—On 13th September, scarlatina was notified in a school girl from the High Street Schools residing in Holyrood Street, and in October three cases, in one house, also in Crewkerne Road. In this case a child was brought from London from an infected house, the disease developed, and the other two children contracted it from her. In all these cases the means adopted prevented the disease spreading.—Diphtheria was notified on 24th December in Churchhouse's yard. I was present when the drains were put to the most severe test without showing any defect. I am of opinion the disease was caused by the faulty arrangements of the house. The closet is placed on the first floor close to the bedroom doors, with no external ventilation, the cistern is filled by a pipe from the main, the house supply being taken from a tap midway between the main and the cistern, and although the water in the cistern cannot get back to the tap any germs of disease in the cistern could do so, as a salmon goes up a weir, and, would be drawn off at the tap. As two cases have since occurred in this house they tend to confirm my opinion, especially as to the water drawn from a pipe, laid on a similar plan for temporary use, was attributed the recent outbreak of typhoid fever among the nurses at the University College Hospital, London.

**DEATHS.**—The total number of deaths was 90; 50 males and 40 females, but as 12 of these occurred in the Union Workhouse, brought there from parishes outside your district, the corrected number is 78, being at the rate of 17·2 per 1000. The number is 25 more than in 1896. Of these 26 occurred during infancy, 5 during adolescence, 22 during the prime, and 37 the decline of life. The causes of deaths of the infants were bronchitis, 6; whooping cough, 6; tubercular disease, 6; diarrhoea, 2; and debility from birth, 6. Of the adults:—typhoid fever, 1; erysipelas, 1; 23 from diseases of the chest, viz:—bronchitis and pneumonia, 6; consumption, 7; heart disease, 15; constitutional causes, 6; debility from age, 24; and accidents, 4. The number of infants is much above the average, of adults from acute diseases of the chest it is below the average, and from heart disease more than double the average. The obituary column of the local press shows that the mortality for a radius of some miles around your district was high, considering the favourable season of 1897, and the increase from 12·1 in 1896 to 17·2 in 1897 in your district, seems to point to a bright summer day, with all its attractions, as being an incentive to carelessness and want of forethought for chilly evenings, with sad results. The following table epitomizes the ages at which deaths occurred grouped according to tables furnished by the Local Government Board.

Under one year	17	} 26
over " " and under 5 years ...	9	
" 5 " " " 15 " ...	2	} 27
" 15 " " " 25 " ...	3	
" 25 " " " 60 " ...	22	
60 " " and upwards	37	37
		90

**WATER SUPPLY.**—There is no reason to doubt that the water, to that portion of your district supplied by mains, except the Crewkerne Road, was other than ample, and of good quality, until the rains set in after the drought, when, as previously stated, the prevalence of epidemic jaundice gave rise to a rumour that "*typhoid fever was raging*" and that the water was polluted, consequently a sample was taken from the conduit near the post office and sent to Mr. Stoddart, the analyst at Bristol, on November 20th, which shewed decided evidence of pollution of a recent origin, and also of previous contamination which had been oxidised, i.e., rendered innocuous. In consequence of a rumour that an error had been made in taking the sample, another from the same conduit was sent to Mr. Stoddart, which not only shewed that no mistake had been made, but corroborated the examination of the one first sent "only with more marked evidence of pollution". The Sanitary Committee, after a discussion, decided, with the view of detecting where the pollution took place, to have samples taken at different places, and also to have the opinion of a second analyst, and, to prevent the suspicion of any mis-adventure, the committee with your Clerk and myself attended and took three samples in duplicate, No 1, from the iron box in spring mead, at the junctions of the two springs. No 2, from the waterhouse in the garden; No 3, from the conduit in Fore Street opposite the Post Office, which were sent respectively to Sir E. Frankland and Mr. Stoddart. The result you know. Sir E. Frankland reported:—"They all possess an extremely high degree of organic

purity, and are most excellent for dietetic purposes"—Mr. Stoddart reported:—"No 1 yielded fairly satisfactory results," and explains that the pollution may be apparent only, and caused by contact with iron surfaces. Considering its source, this is probable.

Nos. 2 and 3 shewed "that the waters are exposed to accidental pollution of an objectionable character, and although I do not think these waters would be necessarily prejudicial to health, I am strongly of opinion that their condition calls for a strict examination of the system by which they are collected and distributed. I should add that all the samples compare very favourably with that received on the 29th inst., if all or any of them were taken from the same source as that, there is strong reason to suspect intermittent pollution of a dangerous kind." This is the crux of the whole matter. I had tested the water taken from the conduit only a fortnight previous to the first sample being sent to Mr. Stoddart, and found the amount of ammonia, i.e., evidence of recent organic pollution—was not in excess of that always present in pure water, absorbed from the air in its descent from the clouds. Both analysts agree that the water taken nearest to its source in Spring Mead is the purest—strong evidence that the springs are not contaminated by Field Bars Pond, distant a few yards—indeed, I consider there is little doubt the water, on the average, is of a high degree of purity, but it should be remembered that it is but a small advantage to be supplied with pure water as a general thing, if now and again it comes charged with organic pollution. The purity of a water supply is to be measured by the worst sample, not by the best, as the strength of a chain is only equal to its weakest link. The epidemics at Maidstone, King's Lynn, and other places teach us a lesson which we should do well to take to heart, for I do not for one moment imagine that the authorities of those towns have been more to blame than similar authorities throughout the country, but they have been unfortunate enough to furnish striking examples of the inevitable results of neglecting to take every precaution to ensure the preservation of the purity of their water supplies, for it is not sufficient to know that the water is pure at its source, unless the strictest supervision is exercised in maintaining that purity in its delivery to the consumers. Mr. Stoddart remarks:—"There is some contaminating influence between the points at which No. 1 and 2 samples were taken; and again, "There is strong reason to suspect intermittent pollution of a dangerous kind." Intermittent pollution!!! Forsooth, gentlemen, the wonder is not that the pollution is intermittent, but that it is not constant, when you have, two feet above the springs and the carriers conveying the water from the waterhouse to the conduit a highly cultivated garden, a celery trench coming within a few inches of them, and those water-carriers the original stone covered "gutters" constructed before the days of Board Schools, when Chard was only a small village, and civilization was not sufficiently advanced or cultured for microbes, bacilli, *et hoc genus omne*. It may truly be said we go through life with our eyes shut unless we learn how to profit by the failures or successes of others.

Hence arises the question how can we apply the lesson of these epidemics to ourselves. The water supply at Maidstone is almost on parallel lines with that of your district. A portion comes from the chalk which was stated to be absolutely pure, the remainder, from



springs. The theory is that the springs were contaminated with the germs of typhoid fever by some hop-pickers who camped near its source. The company had been accustomed to have the water analysed once a month: in consequence, however, of a remarkable immunity from epidemic diseases, it, the company, became too confident, and for economical reasons, decided to extend the analysis to once a quarter. Here was the fresh evidence of relaxed vigilance.

Your supply also comes from the chalk, and from springs, and both are stated to be pure at their source.

In the Crewkerne road there have been cases of typhoid fever, and there is also a cesspool which for the past two years has been periodically overflowing and running down the road over the water main.—Now, there is no reason why, owing to the dry and cracked condition of the surface, allowing of fetid matter being absorbed it should not have been carried down into the soil surrounding the water main, by the heavy rains in August, and once there it would most probably be drawn into the main by suction, as a powerful exhaust is created when the water is turned off, as it is from 10 p.m. to 6 a.m. daily, and any germs of disease present would have been distributed throughout your district on the following morning, as has occurred in other places over and over again.

I would impress on you that turning off the water every night is a decidedly retrograde movement, as thereby you convert a constant supply into an intermittent one, which has been the cause of many epidemics of typhoid fever. I am well aware that no service is always constant, there are frequent intervals, intermissions, or dangerous reductions of pressure, necessitated by repairs, making new connections, etc., etc., which are inevitable and cannot be avoided, but the plan of making your water mains an enormous air-pump, for eight consecutive hours daily, is fraught with danger. The explanation is as follows.—So long as the mains are full the pressure tends to drive a current of water through any leak into the surrounding soil. On the contrary, when the mains are empty, then the hydrostatic pressure is reversed, and the tendency is to draw any fluid from the surrounding soil into the main.

I have on many occasions, and specially in my report for 1896, directed your earnest consideration to this grave danger, and, gentlemen, I should fail in my duty if I did not tell you with all the force such a statement demands, that the same dire calamity which has devastated the fair town of Maidstone has not fallen upon Chard is due more to that mysterious and inexplicable agency termed "good luck," than to good management.

In my report for 1896 occurs the following:—"I am not able to report that any work of sanitary importance has been carried out during the year, no advance has been made with the proposed new bye-laws, the Crewkerne road sewer, enlargement of the sewage farm, or extension of the water works. Although the plans for sewers, &c., had been practically settled last year (1895), it was not until this year had reached its meridian that you received them from your engineer; they were sent to the Local Government Board, and another six months has passed without the official inquiry being held. All this time the cesspools in the Crewkerne road are overflowing, the contents running beside and surrounding your water main, thereby endangering the health and lives of those who use the water. I need scarcely impress on you that such a state of affairs may be attended with very grave results."

I remember the discussion that took place at the next meeting after my report, and on July 1st when the Sanitary Committee reported, "Your committee having met Mr. Walrond, and discussed the sewage scheme, and Mr. Hockey having stated that he would be unwilling to grant to the Council the right of discharging the sewage from the Crewkerne road upon his fields, as was proposed by the scheme now before the Local Government Board, for a fixed term of years, your committee recommend that such scheme be abandoned, and that Mr. Walrond be instructed to prepare a plan for carrying such sewage in front of Chester Terrace to the present outfall works, and that such plan be sent to the Local Government Board for approval, in substitution of the plan now before them." The decision being that the cost of constructing a short sewer could not be paid out of rates, and as the Local Government Board would *shortly* hold an inquiry into (what is known as) the Septic tank system that the matter be postponed until after that inquiry, and then dealt with in its entirety.

Vain hope! When I visited the works at Exeter in June, the new tanks ordered had been working some time, and the notice of inquiry was daily expected; but it was the end of November—more than six months—before it was held, and at the same rate of progression, it will be many months before the decision is given, during which time, you with a large number of sanitary authorities throughout the kingdom, realising your responsibilities and eager to discharge them, are muzzled by the motive power of all sanitary work—the Local Government Board. The following extract from a sanitary publication will explain what I mean, far better than I can do so:—"Before passing on to purely local administration, it is pertinent to ask: does the constitution of our central administration—the Local Government Board—fulfil the requirements of present-day sanitation, and if not, in what respect is it insufficient? Such a question, even if satisfied of its necessity, is easier to ask than to answer within our limit of space; but there is at least one feature in its business methods which is a matter of such frequent comment as to justify a brief reference: its apparent indifference to the *urgency* of matters which are sometimes submitted by local authorities. Everyone connected with public health work, who takes more than a mechanical interest in his business, is occasionally aware of the wearying and annoying delays in things which are locally felt to be of burning importance through the required intervention of the Local Government Board. After every allowance to the advantages of the calm air of impartiality and disinterestedness which the officials of the Board necessarily breathe, and the avoidance of complication by undue haste, it is none the less apparent that they fail to recognise that there are measures *and* measures, and that some of these call for more prompt and decisive action than is accorded all in common."

"Public feeling often times runs very high over this method, or absence of method, of dealing with questions of local urgency, and even the stronghold of the Local Government Board cannot indefinitely ignore the meaning of these demonstrations of opinion. In length of years it is closely approaching those granted by a progressive people to its two predecessors; and if that progression is as marked as there is evidence to indicate it will be in the next few years, the public may possibly call for a more up-to-date central health administration."

SCAVENGING AND HOUSE REFUSE.—The scavenging is regularly and efficiently done, and the removal of the house refuse by your cart is a great boon to the

town. One morning, about 8 o'clock, I counted eleven boxes on the kerb in Holyrood Street ready for removal.

THE SLAUGHTERHOUSES are frequently inspected and regularly whitewashed. The advisability of providing a public abattoir has been under your consideration for some time, and I prepared a statement of the cost, working, and financial results of several towns where they had been built; having considered that statement, the Sanitary Committee report:—"That with regard to the question of the erection of a Public Slaughter-house, your Committee are of opinion the returns made by other boroughs where the same have been provided, do not show that they have been generally used or financially successful, and they do not think it would be otherwise here, they cannot therefore recommend that one should be provided, but they think the resolution which now stands on the books should at once be acted on, viz, that all the butchers should be furnished with the present byelaws and informed that a close and vigilant inspection will be made from time to time by the Medical Officer of Health and Inspector of Nuisances of their Slaughter-houses, so that any infringement of such Bye-laws may be promptly dealt with." I am aware the subject is beset with difficulties, but venture to hope it is only postponed, and that the public spirit and good sense of the butchers will pave the way for a building worthy of your district. Your officers will carry out your resolution, and I would take this opportunity of directing the attention of some of the butchers to bye-laws 12, 13 and 15, which it would appear they had overlooked. I would suggest that when the occupier does not reside at his slaughter-house, a duplicate key be provided for your officers.

BAKEHOUSES periodically inspected and whitewashed.

COMMON LODGING HOUSES.—None.

DISINFECTION.—No isolation hospital or means of disinfecting clothing other than in infected houses, which is very unsatisfactory.

OCCUPATION. — Principally manufacturing, lace factories, iron foundries, breweries, and distillery.

58 formal notices and many verbal ones have been given by your Inspector, and the causes of complaint been remedied.—It is unfortunate the memories of some persons are not so enduring as the patience of your officers!!!

During the year, the progress and prosperity of your district has continued to advance with its customary pace. Sixteen new houses have been built, and connected with the sewer. Ten that are within the sphere of your mains have had the water laid on, the remaining six in Cambridge Street having to depend on wells.

My views are quite in accordance with those recently expressed by Mr. Hodson, that, given a good water supply and proper sewers on the Crewkerne road, the favourable elevation, railway accommodation, and many other advantages, point to your district rapidly increasing in that direction.

The long deferred hopes of obtaining water from a new source for those parts of your district that cannot be supplied by the present system without the expensive process of constant pumping, seem likely to be realised; and it will be a fortunate day for Chard when such is the case. As is well known, the chalk formation is liable to fissures which often extend to great distances, and it was to this cause that the extensive epidemics of typhoid fever at Worthing and Newport in 1894 were due.

An official report of these epidemics was issued by Dr. Thomson, of the Medical Department of the Local Government Board, and both were very instructive from a public health point of view, especially in relation to waters from the chalk, and clearly demonstrate that by means of fissures and otherwise, matters are liable to reach chalk wells in the face of greater obstacles, such as distances, etc., than was formerly deemed to be probable, and point to the necessity of having water from them periodically analysed, not only by chemical but also by bacteriological analysis. A chemical analysis is very excellent for detecting impurities in water, and thereby putting a sanitary authority on its guard, but it is useless in detecting bacteria, and it is possible for water to be practically pure chemically, or only to show evidence of slight pollution, and yet be full of fever germs.

CLOSURE OF PUBLIC SCHOOLS. — In July a very important memorandum was issued by the Local Government Board, on the circumstances under which the closing of public elementary schools, or the exclusion therefrom of particular children may be required in order to prevent the spread of disease. After giving directions for steps to be taken by sanitary authorities, it draws attention to the aid which school masters, school attendance officers, and others can give when an epidemic threatens by affording the earliest information of the occurrence of infectious diseases among the scholars, by the notification of absentees, especially the absence of several children of one family at the same time, no matter what name may be given to the complaint that keeps them at home. It further directs that schoolmasters should be asked to take note of symptoms occurring in any of their scholars that may indicate the commencement of disease, febrile in nature. When scarlet fever or diphtheria is about, every trace of sore throat should be looked upon as suspicious, and the child should be excluded from school until assurance is given that it may attend without harm to itself or danger to others.

In presenting this report, I have endeavoured to place the "situation" before you in a clear and impartial manner. That the state of affairs in the Crewkerne Road may be attended with the most serious consequences to the whole of your district supplied by the town water, no one can doubt, and I should be false to you and to myself if I did not again draw your attention to it in no uncertain voice. As stated before, this constant menace to the health of your district would long since have been removed but for the delay of the Local Government Board in holding the "Septic tank" inquiry at Exeter, and it is only just that your constituents should know who is responsible for this long continued danger, and that no blame can be attached to you, gentlemen, who have given your time and ability in endeavouring to make your district as perfect in all sanitary matters as as it is in municipal administration.

I am, gentlemen,

Your faithful servant,

GEORGE BARNES, M.O.H.

Since the foregoing was written, I have obtained the Registrar General's report for 1897, and again have the pleasure of reporting that the vital statistics of your district, notwithstanding the increased death rate, compare favorably with those of England and Wales.

	England and Wales.	Chard.
Births ... ..	29.7	32.1
Deaths ... ..	17.4	17.2
Zymotic death rate ...	2.15	0.22
Infants per 1000 children born	156	114